Homework 6

This homework is due in class on Monday 11/16/09

1   Course material

Rational functions

For each of the functions defined in the following problems, ignore the textbook question but instead (a) State whether the function is fully factored, and if not, factor it further (b) Determine the $x-$ and $y-$intercepts, (c) Draw a signs table, (d) Determine the behavior of the function near infinity (i.e. say $f(x)$ goes to .... as x goes to $-\infty$ and $f(x)$ goes to .... as x goes to $+\infty$) and finally (e) *Sketch* the function given all of this information.

Textbook Questions: Section 4.7: 12, 14, 26, 42, 45, 52 (ignore textbook question), 53 (ignore textbook question)

Inequalities

Solve the inequalities in the following problem exactly using either a graphical method (studying with a signs table and sketching the function, and finding their intercepts) or a mathematical method (manipulating the inequalities directly). The method to use for each question is specified below.

Textbook Questions: Section 2.4: 16 (direct), 22 (direct), 12 (graphical), 32 (graphical), 39 (graphical), 44 (graphical), 54 (graphical), 52 (graphical), 58 (graphical)

2   Applied Problems

No applied problems this week!